CIVIL-TECH CONSULTANTS AND ENGINEERS

Building & Highway Material Testing Laboratory
An ISO 9001:2008 Certified Company
NABL - Accredited Laboratory as per ISO / IEC-17025 : 2005

JAS-ANZ BSCIC ISO 9001 REGISTERED

Job No.: CTCE/BBMP/SBH/Consultants/47/2018-19 Dated: 08.05.2018

To,
Executive Engineer,
Dasarahalli Division,
BBMP, Bangalore.

Sir,

Sub: **Consultancy Services for the work of Improveemnts to drain at 1st, 2nd, 3rd and 4th cross Vishweshwaraih layout at Bagalagunte in Ward No.14, BBMP, Bangalore**

Ref: 1) EE/DD/WO/209/17-18 Date: 23.01.2018
2) Job Code : 014-18-000014

We are herewith forwarding to **Mr. Shivakumar B.H,** 1st and Final Bill duly verified and certified that the work is satisfactory and for a Gross Value of Rs. 50,20,471 (Rupees Fifty Lakhs Twenty Thousand Four Hundred and Seventy One only) for further needful.

Thanking you,

Civil-Tech Consultants & Engineers Bangalore

Yours faithfully,
For Civil-Tech Consultants and Engineers

8.5.2018
Chief Executive Officer

ಸಹಾಯಕ ಕಾರ್ಯಪಾಲಕ ಅಭಿಯಂತರ
ಟಿ.ದಾಸರಹಳ್ಳಿ ಉಪ-ವಿಭಾಗ
ಬಾಗಲಗುಂಟೆ, ಬಿಬಿಎಂಪಿ
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#23/14, 7th Cross, 3rd Stage, 4th Block, Shakthi Ganapathi Nagara, Basaveshwaranagar, Bangalore-79.
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Building & Highway Material Testing Laboratory

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T-2377

Job No.: CTCE/BBMP/BHSK/W.No.14/CSR-02/560k/CEMENT/2017-18

Date: 03.02.2018

TEST REPORT ON CEMENT

*** Customer**	:	**Asst. Executive Engineer,** T. Dasarahalli Sub Division, BBMP, Bangalore.
*** Agency**	:	**Mr. B.H. Shivakumar,** No.1304, 12th Cross, 7th Main, WOC Road 2nd Sage, Bangalore – 560 086.
*** Name of Work**	:	Improvements to drain at 1st, 2nd, 3rd and 4th cross Vishweshwaraiah Layout at Bagalagunte in Ward No.14, BBMP, Bangalore.
*** Reference**	:	BBMP/DZ/AEE/TDSD/PR/209/2017-18 Dated: 02.02.2018
*** Sample ID**	:	Cement
Sample Received on	:	02.02.2018
Period of Testing	:	02.02.2018 to 03.02.2018

The results of the tests conducted on the cement sample are as follows:

Sl. No	Descriptions	Test Method as per IS	Test Result	Requirements as per IS: 8112-2013
1	Standard Consistency	IS-4031 (Part -4) 1988 (RA-2014)	26.50 %	-
2	a) Initial Setting Time	IS-4031 (Part -5) 1988 (RA-2014)	180 Minutes	Not Less than 30 Minutes
	b) Final Setting Time	IS-4031 (Part -5) 1988 (RA-2014)	475 Minutes	Not More than 600 Minutes
3	Soundness by Le Chartlier Method	IS-4031 (Part-3) 1988 (RA-2014)	1 mm	Not more than 10mm

*Information is furnished by the Customer/Representative.

Civil-Tech Consultants & Engineers Bangalore

Note:

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⇒ The results indicated above are based on the tests carried out on the samples received in the laboratory.

⇒ Any Query regarding the report must be reported within 30 days from the date of testing.

****

VIDYARANI P.K.
Technical Manager

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T-2377

Job No.: CTCE/BBMP/BHSK/W.No.14/CSR-02/560k/SAND-Gradation/2017-18

TEST REPORT ON SIEVE ANALYSIS OF FINE AGGREGATES

03.02.2018

* Customer	:	**Asst. Executive Engineer,** T. Dasarahalli Sub Division, BBMP, Bangalore.
* Agency	:	**Mr. B.H. Shivakumar,** No.1304, 12th Cross, 7th Main, WOC Road 2nd Sage, Bangalore – 560 086.
* Name of Work	:	Improvements to drain at 1st , 2nd, 3rd and 4th cross Vishweshwaraiah Layout at Bagalagunte in Ward No.14, BBMP, Bangalore.
* Reference	:	BBMP/DZ/AEE/TDSD/PR/209/2017-18 Dated: 02.02.2018
* Sample ID	:	Fine Aggregates
Technical Reference	:	IS : 2386 (Part 1) - 1963 (RA-2011)
Sample Received On	:	02.02.2018
Date of Testing	:	03.02.2018

Total Wt. of Aggregates in gms = **1000**

IS Sieve Size in mm	Cumulative Weight Passing in %	Specific Limits as per IS 383-1970 (RA- 2011)			
		Zone-I	Zone-II	Zone-III	Zone-IV
10	100	100	100	100	100
4.75	96.50	90-100	90-100	90-100	95-100
2.36	84.00	60-95	75-100	85-100	95-100
1.18	62.50	30-70	55-90	75-100	90-100
600 Micron	36.00	15-34	35-59	60-79	80-100
300 Micron	17.60	5-20	8-30	12-40	15-50
150 Micron	5.00	0-10	0-10	0-10	0-15

* Information is furnished by the Customer/Representative

Remarks : This sample is under Zone-II specific limits.

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T-2377

Job No.: CTCE/BBMP/BHSK/W.No.14/CSR-02/560k/AGG/GR/2017-18

03.02.2018

TEST REPORT ON SIEVE ANALYSIS OF COARSE AGGREGATES

* Customer	:	**Asst. Executive Engineer,** T. Dasarahalli Sub Division, BBMP, Bangalore.
* Agency	:	**Mr. B.H. Shivakumar,** No.1304, 12th Cross, 7th Main, WOC Road 2nd Sage, Bangalore – 560 086.
* Name of Work	:	Improvements to drain at 1st , 2nd, 3rd and 4th cross Vishweshwaraiah Layout at Bagalagunte in Ward No.14, BBMP, Bangalore.
* Reference	:	BBMP/DZ/AEE/TDSD/PR/209/2017-18 Dated: 02.02.2018
* Sample ID	:	Coarse Aggregates (40mm)
Technical Reference	:	IS : 2386 (Part 1) -1963 (RA-2011)
Sample Received on	:	02.02.2018
Date of Testing	:	03.02.2018

Total Wt. of Aggregates in gms= **5000**

IS Sieve Size in mm	Cumulative Weight Passing in %	Specific Limits as per IS 383-1970 (RA- 2011)	
		Graded	Single Sized
80	100	100	-
63	100	-	100
40	96.92	95-100	85-100
20	53.84	30-70	0-20
10	33.36	10-35	0-5
4.75	2.88	0-5	-

* Information is furnished by the Customer/Representative

Remarks : This sample is under graded specific limits.

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T-2377

Job No.: CTCE/BBMP/BHSK/W.No.14/CSR-02/560k/CC Solid Block/2017-18 05.02.2018

TEST REPORT ON COMPRESSIVE STRENGTH OF SOLID CONCRETE BLOCKS

* Customer	:	**Asst. Executive Engineer,** T. Dasarahalli Sub Division, BBMP, Bangalore.
* Agency	:	**Mr. B.H. Shivakumar,** No.1304, 12th Cross, 7th Main, WOC Road 2nd Sage, Bangalore – 560 086.
* Name of Work	:	Improvements to drain at 1st , 2nd, 3rd and 4th cross Vishweshwaraiah Layout at Bagalagunte in Ward No.14, BBMP, Bangalore.
* Reference	:	BBMP/DZ/AEE/TDSD/PR/209/2017-18 Dated: 02.02.2018
Technical Reference	:	IS: 2185 (Part-1) - 2005 (RA-2010)
Size of Blocks	:	400mm x 200mm x 200mm
Cross Sectional Area	:	80000 mm^2
No. of Blocks Tested	:	08
Sample Received on	:	02.02.2018
Date of Testing	:	05.02.2018

Sl.No.	Block ID	Wt. in Kg	Failure load (KN)	Compressive strength (N/mm^2)	Requirement as per IS: 2185 (Part-1) - 2005 (RA-2010)
1	Block 1	35.12	282.5	3.53	Minimum required Compressive Strength of Individual Units 3.20 N/mm^2
2	Block 2	36.25	284.2	3.55	
3	Block 3	35.15	281.2	3.52	
4	Block 4	36.20	283.5	3.54	
5	Block 5	36.25	280.4	3.51	
6	Block 6	35.14	283.5	3.54	
7	Block 7	36.52	280.5	3.51	
8	Block 8	35.15	282.6	3.53	

*Information is furnished by the Customer/Representative.

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Lab No: CVLE/BBMP/30108/W.No.14/CSR-02/569b/Cube/2017-18

17.03.2018

TEST REPORT ON COMPRESSIVE STRENGTH OF CONCRETE CUBES

* Customer	: Asst. Executive Engineer, T. Dasarahalli Sub Division, BBMP, Bangalore.
* Agency	: Mr. B.H. Shivakumar, No.1304, 12th Cross, 7th Main, WOC Road 2nd Stge, Bangalore – 560 086.
* Name of the work	: Improvements to drain at 1st , 2nd, 3rd and 4th cross Vishweshwaraiah Layout at Bagalgunte in Ward No.14, BBMP, Bangalore.
* Reference	: BBMP/DZ/AEE/TDSD/PR/209/2017-18 Dated: 02.02.2018
* Sample ID	: Cement Concrete
Technical Reference	: IS: 516-1959 (RA-2013)
Size of cubes	: 150mmx150mmx150mm
Cross Sectional Area	: 22500 mm^2
* Grade of Concrete	: M_{20}
Compressive Strength as on	: 28^{th} day
Sample Received on	: 17.03.2018

Sl.No.	* Date of casting	Date of testing	Weight of cube (Kg)	Failure load (KN)	Compressive strength (N/mm^2)
1	17.02.2018	17.03.2018	8.254	275.2	12.23
2	17.02.2018	17.03.2018	8.150	268.5	11.93
3	17.02.2018	17.03.2018	8.326	280.2	12.45

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Job No.: CTCE/BBMP/BHSK/W.No.14/CSR-02/560k/Cube/2017-18

17.03.2018

TEST REPORT ON COMPRESSIVE STRENGTH OF CONCRETE CUBES

* Customer	:	Asst. Executive Engineer, T. Dasarahalli Sub Division, BBMP, Bangalore.
* Agency	:	Mr. B.H. Shivakumar, No.1304, 12th Cross, 7th Main, WOC Road 2nd Sage, Bangalore – 560 086.
* Name of the work	:	Improvements to drain at 1st , 2nd, 3rd and 4th cross Vishweshwaraiah Layout at Bagalagunte in Ward No.14, BBMP, Bangalore.
* Reference	:	BBMP/DZ/AEE/TDSD/PR/209/2017-18 Dated: 02.02.2018
* Sample ID	:	Cement Concrete
Technical Reference	:	IS: 516-1959 (RA-2013)
Size of cubes	:	150mmx150mmx150mm
Cross Sectional Area	:	22500 mm^2
* Grade of Concrete	:	M_{10}
Compressive Strength as on	:	28^{th} day
Sample Received on	:	17.03.2018

Sl.No.	* Date of casting	Date of testing	Weight of cube (Kg)	Failure load (KN)	Compressive strength (N/mm^2)
1	17.02.2018	17.03.2018	8.052	284.2	12.63
2	17.02.2018	17.03.2018	8.325	265.2	11.79
3	17.02.2018	17.03.2018	8.405	275.2	12.23

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